



Use of Wild Animals as Alternative Therapy in Support Zone Villages Around Some Nigeria National Parks.

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Abstract

The study was conducted to identify the medicinal values of some selected animal species in villages around some Nigeria National Parks. Interview was carried out in forty (40) villages around the Parks to determine the animals being utilized by the villagers, the various uses of the animals and the parts used for the various purposes. Four hundred (400) people were interviewed altogether in the villages. The data gathered were summarized in tables. The animals being used for medicinal purposes in the study sites belong to 3 classes, 14 orders, 27 families and 40 species. The animal species were being used in curing diseases such as pile, cough, epilepsy, hemorrhage, rheumatism and cancer. The study concluded that the use of wild animals as alternative therapy is still common in the rural area. There is need to adequately promote the sustainable use of these wild animals so that the species will not be driven to the point of extinction due to over exploitation.

Keywords: Wild animals; Alternative therapy; Nigeria National Park; Support Zone Communities.

Introduction

The earliest record of using plants for healthcare by Chinese people can be traced back to as early as 2700 B.C. However, the medical properties of animals were first identified some two thousand years ago where 65 types of animals were described (Bai, 1988). Animals and products derived from different organs of their bodies have constituted part of the inventory of medicinal substances used in various cultures since ancient times; such uses still exist in traditional medicine. The healing of human ailments by using therapeutics based on medicines obtained from animals or ultimately derived from them is known as zoo-therapy. All human culture which presents a structured medical system will utilize animals as medicines (Marques, 1994). The phenomenon of zoo-therapy is marked both by a broad geographical distribution and very deep historical origins (Ogboh, 2010). In modern societies; zoo-therapy constitutes an important alternative among many other known therapies practiced worldwide. Wild and domestic animals and their by-products (*e.g.*, hooves, skins, bones, feathers, and tusks) form important ingredients in

the preparation of curative, protective and preventive medicine. For example, in Traditional Chinese Medicine (TCM), more than 1500 animal species have been recorded to be of some medicinal use. In India nearly 15–20 percent of the Ayurvedic medicine is based on animal-derived substances (Song, 1994). In Bahia State, in the northeast of Brazil, over 180 medicinal animals have been recorded (Still, 2003). However, little information is available after the survey regarding demand and supply of wildlife items for medicinal use.

Researchers in Australia, Japan, and the United States have found numerous medical uses for compounds extracted from the secretions of frogs, such as a non-addictive painkiller 200 times more powerful than morphine, antibiotics, a possible treatment for schizophrenia, and natural glue that could replace stitches after surgery. The natural world is indeed a potent medicine chest (Guo *et al.*, 1997). Whole bodies, parts and derivatives like organs, tissues, secretions, faeces, pathological substances, etc. are the main items used (Guo *et al.*, 1997). Most of our biological and medicinal advancement are built on the

knowledge derived from nature-various parts of animals such as faeces, bones, liver and others used in curing one ailment or another and to perform in witchcraft (Ajayi, 1973). Of the 252 essential chemicals that have been selected by the World Health Organization, 11.1% come from plants, and 8.7% from animals. Out of the 150 prescription drugs currently in use in the United States of America, 27 have animal origin (Alves and Rosa, 2005). The numerous by-products of wild animals such as skin, feathers, beaks, horns, skull, bones, eyes, spines, eggs etc are used for different purposes in Nigeria, Ajayi, 1973 gave a comprehensive list of the various utilization of the African forest wildlife for traditional medicine and witchcraft. Even though, many homes are adorned with horns, bird feathers and ivory as decoration, a large number of these by-products are used for sorcery, witchcraft and divination (Ajayi, 1973; Onadeko *et al.*, 1989). Worldwide renewed interest in traditional medicine derives from the realization that modern or orthodox medicine is not widespread in poor countries whereas health care has virtually been sustained by these cultural alternatives (Okujagu, 2005). Also, the growing public interest and awareness of natural medicines have led the pharmaceutical industry and academic researchers to pay more attention to medicinal plants (Day, 1998). It is important not only to document the traditional uses of animal species, but also to integrate the cultural and biological aspects of such practices into a broader discourse encompassing conservation, cooperative management, and sustainability (Alves and Rosa, 2005).

Materials and Methods

The study area

The Nigeria National Parks are ecologically and culturally important areas where human habitation is largely disallowed and tourism is encouraged. Presently in Nigeria, there are seven (7) National Parks in different biogeographic zones of the country. These are Chad Basin, Cross River, Gashaka Gumti, Kainji Lake, Kamuku, Old Oyo and Okomu National Parks. Together the national parks cover about 22,592 km², which is about 2.5% of the country's land area of 923,768.64 km². The study was conducted in Cross River (CRNP), Gashaka-Gumti (GGNP),

Kainji Lake (KLNP) and Old Oyo National Parks (OONP) (Osunsina, 2010).

Cross River National Park (CRNP) is located between latitudes 5° 05' and 6° 29'N, and longitudes 8° 15' and 9° 30'E, in the extreme South-eastern part of Nigeria, Cross River State. The Park covers a total land area of 4,000 km², in a location mainly made up of moist tropical primary rainforest ecosystem in the north and central parts of Nigeria's last Great Rainforest Reserve, and mangrove swamps on the coastal zones. Along with Korou National Park in the Republic of Cameroon, Cross River National Park is an important biotic reserve which contains one of the oldest rainforests in Africa. It is also one of the 25 United Nations acclaimed biodiversity hot spots in the World.

Gashaka-Gumti National Park is the largest and most scenic of all the seven National Parks in Nigeria. It covers a total area of 6,731 km², located in the North-eastern part of the country. Geographically, the Park lies between latitudes 6° 55' and 8° 00'N, and within longitudes 11° 11' and 12° 13'E at a location between Adamawa and Taraba States, with adjoining spectacular, temperate-like Mambilla Plateau. Gashaka-Gumti has five distinct ecological zones ranging from Shrub Savanna to Sudan Guinea Savanna; fringing lowland rainforest, to montane forest and grassland habitats.

Kainji Lake National Park (KLNP) was established in 1979 by the merger of the two former Game Reserves – Borgu Game Reserve (located between Niger and Kwara States) and the Zukurma Game Reserve (located in Niger State). It was the first National Park and the second largest of all the seven National Parks in Nigeria with land area of 5,340.83 km². The Park lies between latitude 9° 40' and 10° 30' N and longitude 3° 30' and 5° 50' E (UNEP and WCMC, 2003) and it has savanna vegetation.

The Old Oyo National Park is located in Oyo state, South-west Nigeria, with an area of 2,512 km². It is about 120km long from the southwest to northeast and about 50km at its widest in the south. It lies between latitudes 8° 10' and 9° 05' N, and longitudes 3° 00' and 4° 02' E. The entire Park falls within the Southern Guinea Savanna.

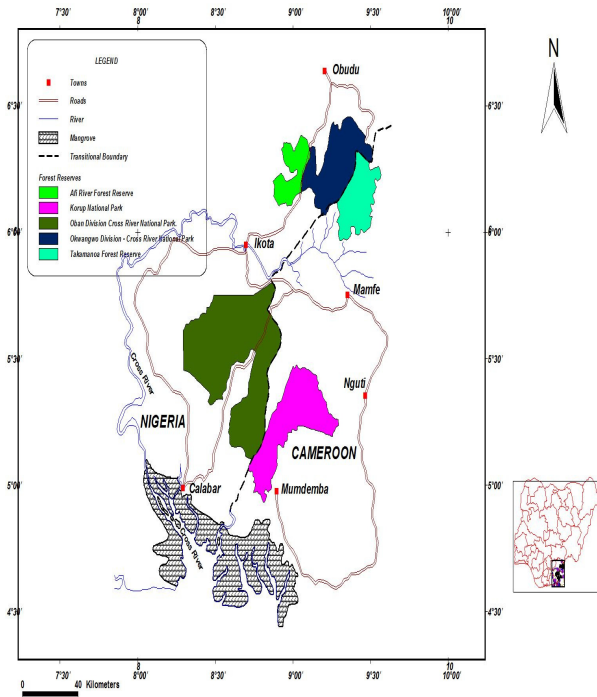


Fig 1: Map showing Cross River National Park

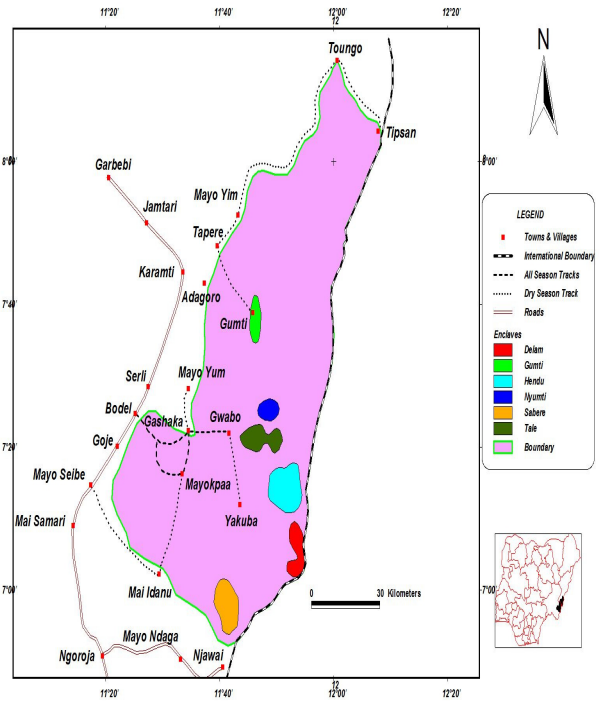


Fig 2: Map showing Gashaka-Gumti National Park

Fig 3: Map showing Kainji Lake National Park

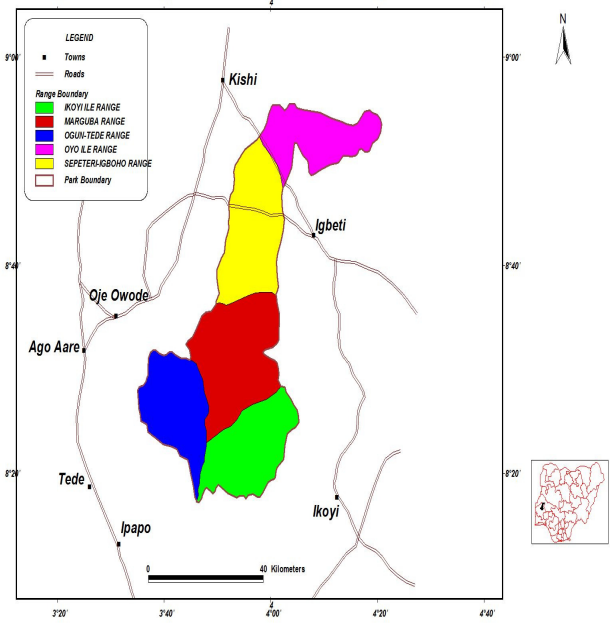
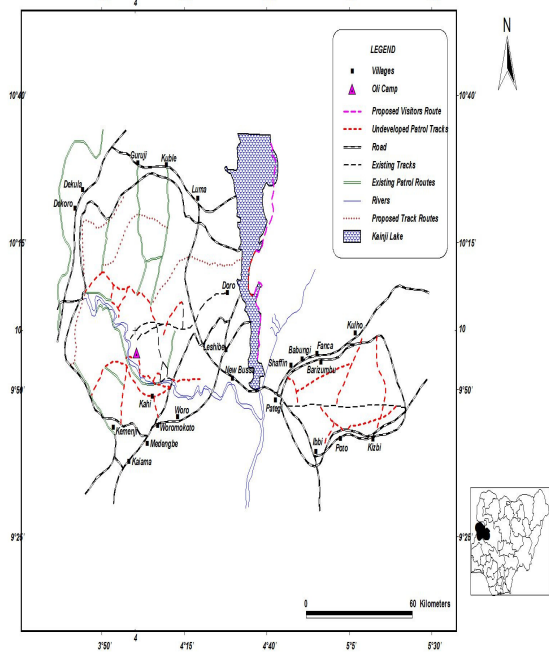


Fig 4: Map showing Old Oyo National Park

DataCollection

Interview was carried out in forty (40) villages to determine the wild animals being utilized by the villagers (10 villages randomly selected from each Park base on their closeness to the Park boundary). The villages include: CRNP - Mba, Bashu, Obung, Ojoor, Anape, Kejiuku, Okwa 1, Okwa 2, Okwango, Osomba: GGNP - Mayo Bakari, Bam, Mayo Gbagbag, Nasamu, Daga, Maiidanu, Lagaso, Mayo Birim, Mayo Sangnare, Mayo Butali; KLNP Ibbi, Patiko 1, Patiko 2, Audu fari, Mulea, Aguan kaya, Kuble, Faje, Kamenji, Tenebo; OONP - Ibudo Baruba, Aloba, Yarima, Gida Olalere, Lasi, Tede, Budo Sango, Alakuko, Oke Owu, Bamgbose. The various uses of the wild animal and their parts used for the said purposes were recorded. Ten (10) people (traditional medical practitioners, hunters and farmers) were interviewed in each village with a total of 400 respondents from all the villages. The

data gathered were summarized using descriptive statistics.

Results

In-depth analyses of the respondent’s socio-cultural and economic activities revealed that there were more males than the females in the parks . In CRNP 74.0% of the respondents were male, 96.0 % in GGNP, 94.0% in KLNP and 77.0% in OONP. Most of the respondents were in the age group 31 – 40 in all the parks and it is slightly higher in GGNP (48.0%) and CRNP (37.0 %) while it is lower in OONP (28.0%) and KLNP (30.0%).The age distribution revealed a pattern of decrease in the number of population as the age increases in CRNP GGNP and OONP, while there is a slight variation in KLNP. The respondents were mostly married in CRNP (79.0%), GGNP (64.0 %), KLNP (73.0%) and OONP (68.0%) (Table 1).

Table 1: Demographic characteristics of respondents

		CRNP	GGNP	KLNP	OONP
Sex	Male	74 (74.0)	96 (96.0)	94 (94.0)	77 (77.0)
	Female	26 (26.0)	04 (4.0)	6 (6.0)	23 (23.0)
Age	20-30	24 (24.0)	32 (32.0)	22 (22.0)	18 (18.0)
	31-40	37 (37.0)	48 (48.0)	30 (28.0)	28 (28.0)
	41-50	27 (27.0)	11 (11.0)	28 (28.0)	20 (20.0)
	51-60	10 (10.0)	5 (5.0)	15 (15.0)	20 (20.0)
	61 and above	2 (2.0)	4 (4.0)	5 (5.0)	14 (14.0)
Religion	Christianity	98 (98.0)	6 (6.0)	16 (16.0)	54 (54.0)
	Islam	0 (0)	88 (88.0)	81(81.0)	45 (45.0)
	Traditional	2 (2.0)	6 (6.0)	3 (3.0)	15 (15.0)
Marital Status	Single	17 (17.0)	33 (33.0)	26 (26.0)	29 (29.0)
	Married	79 (79.0)	64 (64.0)	73 (73.0)	68 (68.0)
	Divorced	1 (1.0)	1 (1.0)	0 (0)	1 (1.0)
	Widow	3 (3.0)	2 (2.0)	2 (2.0)	2 (2.0)
Education	No formal education	39 (39.0)	53 (53.0)	59 (59.0)	54 (54.0)
	Islamic	0 (0.0)	10 (10.0)	17 (17.0)	6 (6.0)
	Primary	34 (34.0)	25 (25.0)	15 (15.0)	18 (18.0)
	Secondary	25 (25.0)	12 (12.0)	6 (6.0)	18 (18.0)
	Tertiary	2 (2.0)	0 (0)	3 (3.00)	4 (4.0)
Occupation	Farming	93 (93.0)	91 (91.0)	81 (81.0)	71 (71.0)
	Hunting	3 (3.0)	5 (5.0)	11 (11.0)	15 (15.0)
	Herbalist	3 (3.0)	4 (4.0)	8 (8.0)	10 (10.0)
	Others	1 (1.0)	0 (0.0)	0 (0.0)	4 (4.0)

Figures in Parenthesis are Percentage

Almost all the respondents in CRNP were Christians (98.0 %) and traditional worshippers (2.0 %). In GGNP and KLNP majority of the respondents were Muslims (88.0 % and 81.0 % respectively) but with fewer number of Christians (6.0 % and 16.0 % respectively). In OONP 54.0 % were Christians, Muslims (44.0 %) and traditional worshippers (15. %). In terms of educational qualification all the parks have higher percentages of respondents without formal education. CRNP recorded 39.0 % of respondent without formal education, 34.0 % had primary education, 25.0% had secondary education while 2.0 % had tertiary education. In GGNP 53.0 % of respondents had no formal education, 25.0% had primary education, 12.0% secondary education, 10.0 % Islamic education while no respondents had tertiary education. In KLNP, 59.0% of respondents had no formal education, 17.0% had Islamic education, 15.0% had primary education, 6.0 % had secondary education and 3.0% had tertiary education. 54.0 % had no formal education in OONP, 18.0% had primary education, 18.0% had secondary education 6.0 % had Islamic education while 4.0 % had tertiary

education. The Primary occupation of the villagers living around the national parks is farming. Almost all the respondents were farmers in CRNP (93.0 %) and GGNP (91.0%), while 81.0% and 71.0 % were farmers in KLNP and OONP.

Most of the respondent living around the parks agreed that most of the animals used were sourced from the park (CRNP (54.0), GGNP (45.0), KLNP (47.0) and OONP (43.0). In terms of animal sightings, majority of the respondents in GGNP, KLNP and OONP indicated that more animals were sighted in the past years than now (51.0%, 70.0% and 80.0% respectively) while respondents in CRNP indicated that more animals were sighted presently than in the past. Fifty two percent (52.0%) and forty one percent 41.0% of the respondents in CRNP and GGNP indicated that the causes of decrease in animal population was due to the increase in human population while 45.0% and 40.0% of the respondents in KLNP and OONP were of the opinion that hunting pressure was the major factor causing decrease in animal population (Table 2)

Table 2: Source and Availability of Animals

	CRNP	GGNP	KLNP	OONP
<i>Sources of animal</i>				
In the park	54 (54.0)	45 (45.0)	47 (47.0)	43 (43.0)
Outside the park	30 (30.0)	40 (40.0)	42. (42.0)	28 (28.0)
No response	16 (16.0)	15 (15.0)	11 (11.0)	29 (29.0)
<i>Occurrence and abundance of wild animal</i>				
In the past	40 (40.0)	51 (51.0)	70 (70.0)	80 (80.0)
Presently	58 (58.0)	45 (45.0)	29 (29.0)	15 (15.0)
Not sure	2 (2.0)	4 (4.0)	1 (1.0)	5 (5.0)
<i>Causes of decrease in animal population</i>				
Hunting	15 (15.0)	21 (21.0)	45 (45.0)	40 (40.0)
Increasing human population	52 (52.0)	41 (41.0)	21 (21.0)	21 (21.0)
Farming activities	9 (9.0)	14 (14.0)	2 (2.0)	4 (4.0)
Deforestation	14 (14.0)	8 (8.0)	10 (10.0)	14 (14.0)
Unknown	10 (10.0)	16 (16.0)	22 (22.0)	21 (21.0)

Figures in Parenthesis are Percentage

The various species of the wild animals used for medicinal purposes in the study area is presented in Table 3 (CRNP), Table 4 (GGNP) Table 5 (KLNP) and Table 6 (OONP). There were

42 species animals belonging to three (3) classes (mammalian, reptilian and avian), 14 orders and 28 families. Mammals were the most utilized among the animals with 29 different species being

used for one medicinal purpose or the other. The Bovidae family was the most widely used family with 6 species which include *Cephalaphus rufilatus* (Red flanked duiker), *Tregalaphus scriptus* (Bush buck), *Kobus defassa* (Water buck), *Acelaphus buselaphus* (hartebeest), *Hippotragus equinus* (Roan antelope), *Syncerus caffer* (Buffalo) in use. The mostly used species of reptiles were *Python sebae* (python) and *Veranus niloticus* (monitor lizards). The avian class was the least utilized wild animals in the study sites with 4 species in use. In CRNP basically nine major species of animals were extensively used in traditional medicine. These include *Loxodonta cyclotis* (forest elephant), *Python sebae* (python), and *Cephalaphus rufilatus* (red flanked duiker) Table 4. Elephant bones were used for strength, treatment of hemorrhage and cure for cancer, while python fat was extensively used as cure for rheumatism and treatment of broken bones. In GGNP, 23 species of wild animals were used for traditional medicines these include *Python sebae* (python), *Syncerus caffer* (buffalo), *Crocota crocuta* (hyena), *Crocodylus niloticus* (crocodile), *Hippopotamus amphibius* (hippopotamus) and *Kobus defassa* (water buck). Fat of python used for cure of rheumatism and pneumonia, buffalo used for cure of ear ache, hyena used for curing children's bedwetting and to dispel evil spirit, crocodile used for protection of children from polio, civet cat used to treat spells, hippopotamus used for cure of cancer and body irritation and water buck used for safe delivery in child birth (Table 4).

The villagers around KLNP used 24 species of wild animals for their traditional

Table 3: The medicinal uses of Wildlife in Cross River National Park (CRNP)

Animal	Scientific Name	Family	Part Used	Medicinal Uses
Elephant	<i>Loxodonta africana</i>	Elephantidae	Bone Droppings	Anti-convulsion; Charms for strength Cure for cancer ; Treatment for pile; Treatment of Hemorrhage
Python	<i>Python sebae</i>	Boidae	Fat	Treatment of broken bones; Cure of rheumatism
Chimpanzee	<i>Pan troglodytes</i>	Hominidae	Bile	Treatment of ulcer and cough
Monitor lizard	<i>Veranus niloticus</i>	Varanidae	Skin	Prevent miscarriage in women
Porcupine	<i>Atherurus africanus</i>	Erethizontidae	Bones	Protection from witchcraft in children
Chameleon		Chamaeleonidae	Liver	Treatment of cough
Tortoise	<i>Kinixys belliana</i>	Testudinidae	Bile	Treatment of Ulcer
Red flanked duiker	<i>Cephalaphus rufilatus</i>	Bovidae	Meat	Treatment of chest pain and cough
			Shell	Treatment of Pile
			Bone	Treatment of crippledness in children
			Hair	Treatment/ prevention of Tetanus

medicine these include *Hippopotamus amphibius* (hippopotamus), *Lepus capensis* (hare), *Veranus niloticus* (monitor lizards), *Orycteropus afer* (aardvark). Lion fat and bones were being used for cure of rheumatism, fraction and dislocation, hippopotamus used for treatment of delayed child birth, hare head used for treatment of difficulty in breathing, aardvark meat used for prolong child birth, monitor lizard used for treatment of measles in children, roan antelope meat used for healthiness and ground squirrel used for spiritual protection (Table 5). Twenty one (21) animal species were used in traditional medicine in OONP, commonly used animals were *Hippotragus equines* (Roan antelope), *Orycteropus afer* (aardvark), *Potamochoerus porcus* (red river hog), *Phacochoerus aethiopicus* (Warthog) and *Crocota crocuta* (hyena) and *Syncerus caffer* (buffalo). Roan antelope horn used for protection of children against witchcraft power and to acquire spiritual power and authourity, cane rat skin and intestine used for treatment of skin diseases in children, aardvark used for cure of leprosy at the earlier stage, green monkey skull used for cure of stomach upset for children , warthog bone used for curing teething cure in children, red river hog bone used for cure of skin diseases, warthog tusk used for cure for teething problem in children, hyena used for spiritual protection, buffalo bone and skin used for protection from witchcraft , python teeth used for cure of stomach upset, bush buck bone used for strong bones in children and strength and water buck used for talisman (Table 6).

The result also shows that some animals were widely used for the same purposes around the parks, for example python fat is used by all the villages around the 4 Parks as cure for rheumatism, while python fat were also used for treatment for fracture and dislocation in CRNP and GGNP. Also lion bone is used for strength

and power while lion fat is used for treatment of dislocation and fracture in GGNP and KLNP. Chimpanzee skin is used for prevention of miscarriage in women, while the bone is used for protection from witchcraft in children in CRNP and OONP.

Table 4: The medicinal uses of Wildlife in Gashaka-Gumti National Park (GGNP)

Animal	Scientific Name	Family	Part Used	Medicinal Uses
Python	<i>Python sebae</i>	Boidae	Fat	Cure for Rheumatism; Dislocation and fracture; Treatment for cold and Pneumonia; Swelling skins
			Bone	Strong bones and healthy growth
			Skin	Cure of bedwetting in children; Treatment of bad dreams
Buffalo	<i>Syncerus caffer</i>	Bovidae	Ear	Cure for ear ache
Hyaena	<i>Crocuta crocuta</i>	Felidae	Skin	Cure children's bedwetting
Lion	<i>Panthera leo</i>	Felidae	All flesh	Dispels evil spirit
			Fat	Dislocation and fracture
			Bone	For strength
			Fat	Skin treatment
Bush fowl	<i>Francolinus bicalcaratus</i>	Phasianidae	Skin	For spiritual power
Duiker	<i>Cephalophus rufilatus</i>	Bovidae	Leg	Cure of ear problem
			Gall bladder	For spiritual protection Cure of Pile
Crocodile	<i>Crocodilus niloticus</i>	Alligatoridae	Teeth	Protection from polio
Civet cat	<i>Viverra civetta</i>	Viverridae	Anus	To treat spells
Chimpanzee	<i>Pan troglodytes</i>	Hominidae	Bones	Physical strength; Healing of fracture and dislocation
Hippopotamus	<i>Hippopotamus amphibius</i>	Hippopotamidae	Foot	Cure for body irritation
Monitor Lizard	<i>Veranus niloticus</i>	Varanidae	Sole of foot	Cure of cancer
			Fat	Treatment of dislocation
Straw colored Bat	<i>Eidolon helvum</i>	Pteropodidae	Tail	Cure of epilepsy
Nile rat	<i>Arvicanthis niloticus</i>	Muridae	Eyes	Cure of Blindness
Mouse	<i>Myomys daltoni</i>	Muridae	Whole body	For smartness in children
Elephant	<i>Loxodonta africana</i>	Elephantidae	Any Part	Cure of swelling sickness
Lizard	<i>Agama agama</i>	Agamidae	Meat	Treatment of general pain
Water buck	<i>Kobus defassa</i>	Bovidae	Meat	Whooping coughs
			Intestine/Skin	Safe delivery in child birth
Patas monkey	<i>Erythrocebus patas</i>	Cercopithecidae	Skull	Cure of headache
Hawk eagle	<i>Hieranetus spilogaster</i>	Accipitridae	Feather	Dispels evil spirit
Tortoise	<i>Kinixys belliana</i>	Testudinidae	Shell	To ease labour of child birth
			Anus	Cure of menstrual pain

Table 5: The medicinal uses of Wildlife in Kainji Lake National Park (KLNP)

Animal	Scientific Name	Family	Part Used	Medicinal Uses
Hippopotamus	<i>Hippopotamus amphibius</i>	Hippopotamidae	Faeces	Make children walk
Lion	<i>Panthera leo</i>	Felidae	Fat	Cure sickness
			Bone	Cure to delayed child birth
			Fat	Cure sterility in woman; Fracture and dislocation
			Heart	For increased strength
Hare	<i>Lepus capensis</i>	Leporidae	Bone	Cure of madness
			Fat, Bone	Cure of rheumatism
			Head	Cure for difficult breathing
			Ears, limbs	Cure of fever
Aardvark	<i>Orycteropus after</i>	Orycteropodidae	Ear ,	Treatment of convulsion
			Urine/faeces	
			Meat	Prolonged child birth
Guinea fowl	<i>Numidia meleagris</i>	Numidadae	Urine	Cure of ear problem
Monitor lizard	<i>Varanus niloticus</i>	Varanidae	Body Parts	Cure delayed child birth
Mongoose	<i>Crossarchus obscurus</i>	Herpestidae	Skin	Treatment of Measles
Grey horn bill	<i>Tockus nasatus</i>	Bucerotidae	Fat	Removal of skin trapped thorn
Python	<i>Python sebae</i>	Boidae	Anus	Drives evil /evil spirits away
			Bones	For curing sickness For curing sickness
Ground squirrel	<i>Xerus erythropus</i>	Scuridae	Fat	Cure of rheumatism
			Oil/ fat	For treatment of wounds; Treating of back/body pains
Roan Antelope	<i>Hippotragus equinus</i>	Bovidae	Tail	For spiritual protection
Elephant	<i>Loxodonta africana</i>	Elephantidae	Meat	For healthiness
			Skin	Curing of wound
Red flanked duiker	<i>Cephalaphus rufilatus</i>	Bovidae	Meat	Stomach pain
			Faeces	Treatment of headache
			Kidney	Ear problem
Lizard	<i>Agama agama</i>	Agamidae	Meat	For cough
Monitor lizard	<i>Veranus niloticus</i>	Varanidae	Fat	Treating of back/body pains
African giant Snail	<i>Achatina achatina</i>	Mollusa	Fluid	Treatment of ear problem
Giant rat	<i>Cricetomys gambianus</i>	Nesomyidae	Tail	Spiritual authority/command
Viper	<i>Bitis gaboonica</i>	Viperidae	Fat	Treatment of fracture
Baboon	<i>Papio anubis</i>	Cercopithecidae	Brain	Treatment Scorpion sting
Crocodile	<i>Crocodilus niloticus</i>	Alligatoridae	Faeces	For spiritual protection
			Fat	Treatment of dislocation
Leopard	<i>Pathera pardus</i>	Felidae	Eyes	Treatment of eye problem
Guinea fowl	<i>Numidia meleagris</i>	Numidadae	Fat	Treatment of dislocation
Porcupine	<i>Atherurus africanus</i>	Erethizontidae	Intestine	Treatment of stomach pain

Table 6: The medicinal uses of Wildlife in Old Oyo National Parks (OONP)

Animal	Scientific Name	Family	Part Used	Medicinal Uses
Hunting dog	<i>Lycaon pictus</i>	Canidae	Bone	Prevent feeling of nostalgia in children; Cure of dizziness
Roan Antelope	<i>Hippotragus equinus</i>	Bovidae	Bone	Protection from witchcraft in children
Aardvark	<i>Orycteropus after</i>	Orycteropodidae	Horn Tail	For spiritual power and authority For spiritual power and authority
Green monkey	<i>Cercopithecus aethiops</i>	Cercopithecidae	Paws Skull	Cure of leprosy at the earlier stage Cure of stomach upset for children; For protection from witchcraft
Red river hog	<i>Potamochoerus porcus</i>	Suidae	Bone	Cure teething problem in children; Cure of skin diseases
Chimpanzee	<i>Pan troglodytes</i>	Hominidae	Skin Bones	Prevents miscarriage in women Protection from witchcraft in children
Flying squirrel	<i>Anomalurus sp</i>	Scuridae	Tail	Prevents of miscarriage in women
Warthog	<i>Phacochoerus aethiopicus</i>	Suidae	Tusk	Cure for teething problem in children
Lion	<i>Panthera leo</i>	Felidae	Bones	For strength and power; Immunity against diseases in children
Elephant	<i>Loxodonta africana</i>	Elephantidae	Faeces Skin Bone	Healings for diseases Protection from dangers Charms for becoming invisible
Leopard	<i>Panthera pardus</i>	Felidae	Skin	Strength for physical combat; Protection from witchcraft; To command respect and honour
Python	<i>Python sebae</i>	Bovidae	Teeth	Burnt teeth for cure of stomach upset
Hyaena	<i>Crocuta crocuta</i>	Felidae	Skin	For spiritual protection
Buffalo	<i>Syncerus caffer</i>	Bovidae	Bone Skin	Protection from witchcraft For protection from witchcraft
Bush buck	<i>Tregalaphus scriptus</i>	Bovidae	Bone Horn	Strong bones/ strength in children; Cure of rheumatism Spiritual authority/power/command
Water buck	<i>Kobus defassa</i>	Bovidae	Skin	For talisman
Heart beast	<i>Acelaphus buselaphus</i>	Bovidae	Skin	For quick fortune
Mongoose	<i>Crossarchus obscurus</i>	Herpestidae	Nose	Prevent nose bleeding
Guinea fowl	<i>Numidia meleagris</i>	Numidadae	Liver,skull Intestine	Mixture used for treatment of dizziness
Cane rat	<i>Thryonomys swinderianus</i>	Thryonomyidae	Skin intestine	Treatment of skin diseases in children

Discussion

Majority of the respondents were male in all the villages visited and their age group range were 21 – 55 years. This is the most active age segment of the human population. This agrees with the findings of Saidu (2006), Oyinloye (2007) and Okeyoyin (2009) in KLNP. In terms of religious affiliation, majority of the respondents from CRNP and OONP were Christians, while respondents from GGNP and KLNP were predominantly moslems. This could be linked to the geographical locations of the parks. In-depth analysis of the educational status of the respondents revealed that almost half of the respondents in each park were illiterate except in CRNP where there was fairly higher number of respondents who attended secondary and tertiary education 25.58% and 6.29% respectively. Adekunle (1998) stated that vicious cycle of poverty increases with rising level of illiteracy. The more enlightened the people, the higher the tendency to conserve the animals.

The uses of wild animal for medicinal purposes have been reported by several researchers (Adeola, 1992; Onadeko *et al.*, 1989). Wildlife species were used in traditional medicine around the parks. Different parts of the animals were used for traditional medicine. Major diseases such as epilepsy, cancer, convulsion, paralysis, snake bites, mental illness, and even other ailments having hereditary origins are now being cured by traditional medicine (Odu, 1987). Python fat is one of the most highly priced wild animal products which is usually used for treatment of fracture, rheumatism and other muscular ailments. Wildlife provides some important components of traditional medicine and their flesh is credited with medicinal properties (Chardonnet *et al.*, 2002). The use of Lion's bone in OONP environs is believed to provide strength and power for children. Lion's bones in Burkina Faso was also used to strengthen the bones of children and cane rat used in curing skin diseases in children in OONP was also used in several other West African Countries (Chardonnet *et al.*, 2002). Animal-based medicines have always played a significant role in the healing practices, magic, rituals and religions of societies all over the world (Angelletti *et al.*, 1992; Rosner,

1992). In most of the villages around the Parks, wild animals were used for traditional medicine since their parts are credited with medicinal properties (Osunsina, 2010).

The wild animal parts were sold to traditional collectors by local hunters who in turn sell them to traditional healers and other interested individuals. In almost every major town or city in West Africa, market stalls can be found where parts of wild plants and animals are retailed for medicinal purposes (Ntiamao – Baidu, 1997). This traditional non food utilization of wildlife encourages the depletion of animal population through poaching, since there are willing buyers and ready markets for the animal parts. The common dilemma facing all fauna species is the soaring demand for their body parts for use in medicinal products. (Gaski *et al.*, 1994; Soewu, 2008).

Regrettably, the demand created by traditional medicine is one of the causes of the overexploitation of the wild population of numerous animal species (Osunsina, 2010). The use of animals in popular medicine certainly provokes pressure on natural resources exploited through traditional forms of collection, mainly due to general acceptance of popular medicine. Medically speaking, the one major negative consequence of this trend is that there will be essentially less choice for the future development of medicines because of the unsustainable use of the animal. The implication of the use of wild animals is that there would be hunting pressure on the population of these species of animals because of the demand for their parts for traditional medicine in some of the villages around the Parks (Osunsina, 2010). Also, reports of scarcity of species used for traditional medicine are being received with increasing frequency. Certain animals are already becoming rare due to indiscriminate killing for traditional medicinal preparations (Kakati and Duolo, 2002) and some might soon become extinct.

Conclusion

Despite their importance, studies on the therapeutic uses of animals and their body parts have been neglected, when compared to plants. Scholarly investigation of studies on medicinal uses of animals and their products should not be

neglected and should be considered as an important complementary body of knowledge. The extensive practice of traditional medicine in developing countries and the rapidly growing demand for alternative and basic therapeutic means (also in industrialized countries) constitute the international relevancy of research and development in the field of traditional drugs. The use of animals for medicinal purposes is part of a body of traditional knowledge which is increasingly becoming more relevant to discussions on conservation biology, public health policies, and sustainable management of natural resources, biological prospecting and patents. It is important to consider that human health is dependent on biodiversity and on the natural functioning of healthy ecosystems. Also care must be taken to adequately promote the sustainable use of these wild animals so that the species will not be driven to the point of extinction due to over exploitation .

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